

09/718,943

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(FILE 'HOME' ENTERED AT 14:42:08 ON 07 JAN 2002)

FILE 'CA' ENTERED AT 14:42:16 ON 07 JAN 2002

E GASSENMEIER THOMAS/IN  
L1 42 S E3-E4  
E MILLHOFF JUERGEN/IN  
L2 10 S E3-E4  
L3 2899 S (SILICATE# OR ALUMINOSILICATE# OR ZEOLITE# OR PHOSPHATE# OR  
S  
L4 86 S L3 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR  
AGGLO  
L5 89 S L3 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR  
AGGLO  
L6 179072 S PARTICLE(3A) (SIZE# OR DIAMETER OR RADIUS)  
L7 13 S L5 AND L6

FILE 'USPATFULL' ENTERED AT 15:43:02 ON 07 JAN 2002

L8 205 S L7  
L9 750 S (SILICATE# OR ALUMINOSILICATE# OR ZEOLITE# OR PHOSPHATE# OR  
S  
L10 52 S L9 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR  
AGGLO

=>

L2 ANSWER 1 OF 10 CA COPYRIGHT 2002 ACS  
 AN 135:21246 CA  
 TI Method for the production of particulate washing or cleaning agents  
 IN **Millhoff, Juergen**; Schmiedel, Peter; Von Rybinski, Wolfgang;  
 Krupp, Ute; Gassenmeier, Thomas Otto  
 PA Henkel Kommanditgesellschaft Auf Aktien, Germany  
 SO PCT Int. Appl., 16 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 IC ICM C11D017-00  
 ICS C11D003-06; C11D003-39; C11D003-08; C11D003-10; C11D003-12  
 CC 46-6 (Surface Active Agents and Detergents)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001038477	A1	20010531	WO 2000-EP11425	20001117
	W: AU, BR, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, MX, PL, RO, RU, SG, SI, SK, TR, UA, ZA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 19957036	A1	20010531	DE 1999-19957036	19991126

PRAI DE 1999-19957036 A 19991126

AB The particulate washing or cleaning agents, or their precursors are manufd. by coating a free-flowing acid component, e.g., a C10-22 mono- or dicarboxylic acid, C10-22 alk(en)yl sulfate, C10-22 alkylarylsulfonate, etc., on a particle comprising an alk. washing or cleaning agent-contg. material. As a result, the washing process begins at a relatively lower pH which, after a specified period of time, changes to higher values.

The amt. of coated acid component depends on the radius of the solid particle,  
 i.e.,  $mc/(mc + mp) = c \cdot \text{cntdot} \cdot 1/r$ , where mc = mass of the acid component, mp = mass of the particles, r = radius of the particles (preferably 100-1000 .mu.m), and c = factor of 0.5-20 length units. For example, a particulate component of a solid detergent was manufd. by mixing 1 kg Na percarbonate (av. particle size 400 .mu.m) with 25 g stearic acid at ambient temp., heating and compounding the mixt. in a blender for 20 min at 80.degree., and cooling.

ST detergent component particle acid coating; stearic acid coating sodium percarbonate solid detergent component

IT Detergents  
 (manuf. of particulate washing or cleaning agents comprising acid-coated particles)

IT 57-11-4, Stearic acid, uses  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (manuf. of particulate washing or cleaning agents comprising acid-coated particles)

IT 15630-89-4, Sodium percarbonate  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (manuf. of particulate washing or cleaning agents comprising acid-coated particles)

RE.CNT 6

RE

(1) Akzo Nv; GB 2000177 A 1979 CA

- (2) Henkel Kgaa; DE 4128826 A 1993 CA
- (3) Kao Corp; EP 0790298 A 1997 CA
- (4) Mouret, G; US 3525695 A 1970
- (5) Procter & Gamble; FR 2180864 A 1973 CA
- (6) Solvay Interlox GmbH; DE 4344831 A 1995 CA

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L5 ANSWER 26 OF 89 CA COPYRIGHT 2002 ACS  
 AN 127:250203 CA  
 TI Manufacture of stable **granular** sodium percarbonate suitable for  
 bleaching agent in **detergent** compositions  
 IN Kim, San Ryul; Kwan, Chon Yun; Heo, Fan Ki; Lee, Jong Pil  
 PA Oriental Chemical Industries, Japan  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C01B015-10  
 CC 49-5 (Industrial Inorganic Chemicals)  
 Section cross-reference(s): 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09235109	A2	19970909	JP 1996-68978	19960301

AB In manuf. of Na **percarbonate** by spraying H<sub>2</sub>O<sub>2</sub> aq. solns. to NaCO<sub>3</sub> which is stirred by air flow in a container to give Na **percarbonate** at a const. temp. followed by drying to give Na **percarbonate** grains, unpurified Na **carbonate** anhydride is used as a raw material and the Na **percarbonate** grains of prescribed size are taken out from the dryers while unhomogeneous-sized grains are recirculated for continuously manufg. process. In manuf. of the Na **percarbonate** grains in reactors or **fluidized** bed dryers, Mg sulfate and .gtoreq.1 compds. selected from (A) water glass or powd. or granular Na **silicate** (aq. solns.) having a general formula Na<sub>2</sub>O.nSiO<sub>2</sub>.xH<sub>2</sub>O (n = 1-4, x = 0-9), (B) higher aliph. acids (esters) of hydrocarbons or polyols and optionally polyoxyethylene, (C) pyridine compds. (salts) having .gtoreq.1 carboxy substitutes, and (D) arom. or aliph. amine (salts) having .gtoreq.1 **sulfonic acid** groups or carboxyl groups are allowed to be mixed into or on the surfaces of Na **percarbonate** grains. The Na **silicate coatings** improve soly. in cold water while the claimed org. compds. work as sequestering agents to prevent decompn. of the Na **percarbonate** grains which may contain transition metal impurities in moist air.

ST sodium percarbonate bleaching agent manuf; **detergent** bleacher sodium percarbonate **granule**; sequestering agent coating sodium percarbonate bleacher

IT Coatings  
 (atm. moisture-resistant; manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT Glycosides  
 Polyoxyalkylenes, uses  
 Sequestering agents  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings on Na percarbonate grains; in manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT **Fatty acid** esters  
 Sugar esters  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings on Na **percarbonate** grains; manuf. of **granular** Na **percarbonate** suitable for bleaching agents in **detergent** compns.)

IT Amines, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(having **sulfonic acid** groups or carboxyl groups,  
**coatings** on Na **percarbonate** grains; in manuf. of  
**granular** Na **percarbonate** suitable for bleaching  
agents in **detergent** compns.)

IT Bleaching agents  
**Detergents**  
(manuf. of **granular** Na percarbonate suitable for bleaching  
agents in **detergent** compns.)

IT 54-21-7, Sodium salicylate 57-50-1, uses 69-65-8, D-Mannitol  
110-86-1D, Pyridine, carboxy derivs. 482-54-2 499-83-2, Dipicolinic  
acid 1344-09-8, Water glass 6834-92-0, Sodium metasilicate  
7487-88-9, Magnesium sulfate, uses 25322-68-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings on Na percarbonate grains; in manuf. of **granular** Na  
percarbonate suitable for bleaching agents in **detergent**  
compns.)

IT 3313-92-6P, Sodium percarbonate  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**granular**; manuf. of **granular** Na percarbonate  
suitable for bleaching agents in **detergent** compns.)

IT 497-19-8, Sodium carbonate, reactions 7722-84-1, Hydrogen peroxide,  
reactions  
RL: RCT (Reactant)  
(in manuf. of **granular** Na percarbonate suitable for bleaching  
agents in **detergent** compns.)

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L5 ANSWER 26 OF 89 CA COPYRIGHT 2002 ACS

AN 127:250203 CA

TI Manufacture of stable **granular** sodium percarbonate suitable for bleaching agent in **detergent** compositions

IN Kim, San Ryul; Kwan, Chon Yun; Heo, Fan Ki; Lee, Jong Pil

PA Oriental Chemical Industries, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C01B015-10

CC 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 09235109	A2	19970909	JP 1996-68978	19960301

AB In manuf. of Na **percarbonate** by spraying H<sub>2</sub>O<sub>2</sub> aq. solns. to NaCO<sub>3</sub> which is stirred by air flow in a container to give Na **percarbonate** at a const. temp. followed by drying to give Na **percarbonate** grains, unpurified Na **carbonate** anhydride is used as a raw material and the Na **percarbonate** grains of prescribed size are taken out from the dryers while unhomogeneous-sized grains are recirculated for continuously manufg. process. In manuf. of the Na **percarbonate** grains in reactors or **fluidized** bed dryers, Mg sulfate and .gtoreq.1 compds. selected from (A) water

glass

or powd. or granular Na **silicate** (aq. solns.) having a general formula Na<sub>2</sub>O.nSiO<sub>2</sub>.xH<sub>2</sub>O (n = 1-4, x = 0-9), (B) higher aliph. acids (esters) of hydrocarbons or polyols and optionally polyoxyethylene, (C) pyridine compds. (salts) having .gtoreq.1 carboxy substitutes, and (D) arom. or aliph. amine (salts) having .gtoreq.1 **sulfonic acid** groups or carboxyl groups are allowed to be mixed into or on the surfaces of Na **percarbonate** grains. The Na **silicate coatings** improve soly. in cold water while the claimed org. compds. work as sequestering agents to prevent decompn. of the Na **percarbonate** grains which may contain transition metal impurities in moist air.

ST sodium percarbonate bleaching agent manuf; **detergent** bleacher sodium percarbonate **granule**; sequestering agent coating sodium percarbonate bleacher

IT Coatings

(atm. moisture-resistant; manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT Glycosides

Polyoxyalkylenes, uses

Sequestering agents

RL: TEM (Technical or engineered material use); USES (Uses)

(coatings on Na percarbonate grains; in manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT **Fatty acid** esters

Sugar esters

RL: TEM (Technical or engineered material use); USES (Uses)

(coatings on Na **percarbonate** grains; manuf. of **granular** Na **percarbonate** suitable for bleaching agents in **detergent** compns.)

IT Amines, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (having **sulfonic acid** groups or carboxyl groups,  
**coatings** on Na **percarbonate** grains; in manuf. of  
**granular** Na **percarbonate** suitable for bleaching  
 agents in **detergent** compns.)

IT Bleaching agents  
**Detergents**  
 (manuf. of **granular** Na percarbonate suitable for bleaching  
 agents in **detergent** compns.)

IT 54-21-7, Sodium salicylate 57-50-1, uses 69-65-8, D-Mannitol  
 110-86-1D, Pyridine, carboxy derivs. 482-54-2 499-83-2, Dipicolinic  
 acid 1344-09-8, Water glass 6834-92-0, Sodium metasilicate  
 7487-88-9, Magnesium sulfate, uses 25322-68-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings on Na percarbonate grains; in manuf. of **granular** Na  
 percarbonate suitable for bleaching agents in **detergent**  
 compns.)

IT 3313-92-6P, Sodium percarbonate  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (**granular**; manuf. of **granular** Na percarbonate  
 suitable for bleaching agents in **detergent** compns.)

IT 497-19-8, Sodium carbonate, reactions 7722-84-1, Hydrogen peroxide,  
 reactions  
 RL: RCT (Reactant)  
 (in manuf. of **granular** Na percarbonate suitable for bleaching  
 agents in **detergent** compns.)

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L5 ANSWER 20 OF 89 CA COPYRIGHT 2002 ACS  
 AN 129:190764 CA  
 TI High-bulk-density **granulated detergent** compositions  
 and production methods therefor  
 IN Murakami, Yasuhiro; Tanimoto, Hitoshi  
 PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C11D003-08  
 ICS C11D003-12; C11D010-06; C11D011-00; C11D011-04; C11D017-06  
 CC 46-6 (Surface Active Agents and Detergents)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10195485	A2	19980728	JP 1997-3854	19970113
AB	Detergents contain 1-8% cryst. <b>silicates coated</b> with soap compns. and 20-40% anionic surfactants. Thus, a <b>coating</b> compn. contained a tallow <b>fatty acid</b> , polyethylene glycol alkyl ether, and polyethylene glycol at ratio 35:55:10.				
ST	anionic surfactant silicate detergent; coating soap cryst silicate				
IT	Polyoxyalkylenes, uses				
	RL: MOA (Modifier or additive use); USES (Uses) (alkyl ethers; high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Anionic surfactants				
	<b>Detergents</b>				
	Nonionic surfactants (high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Polyoxyalkylenes, uses				
	RL: MOA (Modifier or additive use); USES (Uses) (high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Silicates, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Soaps				
	RL: TEM (Technical or engineered material use); USES (Uses) (high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Alkali metals, uses				
	Alkaline earth metals Group IIB elements Group IIIA elements Group IVA elements Group VIII elements				
	RL: TEM (Technical or engineered material use); USES (Uses) (silicates; high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. silicates coated with soaps)				
IT	Tallow <b>fatty acids</b>				
	RL: MOA (Modifier or additive use); USES (Uses) (soaps; high-bulk-d. <b>granulated detergents</b> contg. anionic surfactants and cryst. <b>silicates coated</b> with soaps)				



IT **Fatty acid esters**

RL: TEM (Technical or engineered material use); USES (Uses)

(.alpha.-sulfo, Me esters, sodium salts; high-bulk-d.

**granulated detergents** contg. anionic surfactants and  
cryst. **silicates coated** with soaps)

IT 25322-68-3, Polyethylene glycol 25322-68-3D, Polyethylene glycol, alkyl  
ethers

RL: MOA (Modifier or additive use); USES (Uses)

(high-bulk-d. **granulated detergents** contg. anionic  
surfactants and cryst. silicates coated with soaps)

IT 98-11-3D, Benzenesulfonic acid, alkyl derivs., sodium salts 151-21-3,  
Sodium dodecyl sulfate, uses 1191-50-0, Sodium tetradecyl sulfate

RL: TEM (Technical or engineered material use); USES (Uses)

(high-bulk-d. **granulated detergents** contg. anionic  
surfactants and cryst. silicates coated with soaps)

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L5 ANSWER 45 OF 89 CA COPYRIGHT 2002 ACS  
AN 118:8927 CA  
TI Sodium percarbonate stabilized by a long-chain aliphatic carboxylic acid coating, and its uses  
IN Block, Christian; Schreiber, Gerald  
PA Henkel K.-G.a.A., Germany  
SO PCT Int. Appl., 17 pp.  
CODEN: PIXXD2  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9217404	A1	19921015	WO 1992-EP577	19920317
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
PRAI	DE 1991-4109954		19910326		

L5 ANSWER 47 OF 89 CA COPYRIGHT 2002 ACS  
AN 115:235227 CA  
TI Bleaching agents and bleaching detergent compositions with good storage stability  
IN Kuroda, Mutsumi  
PA Kao Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03115496	A2	19910516	JP 1989-254213	19890929

L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS  
AN 110:97601 CA  
TI Surface treatment of solid detergent components in a fluidizing apparatus  
IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg, Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar  
PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.  
SO Ger. (East), 8 pp.  
CODEN: GEXXA8  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 255882	A1	19880420	DD 1986-296068	19861107

=>

L5 ANSWER 45 OF 89 CA COPYRIGHT 2002 ACS

AN 118:8927 CA

TI Sodium percarbonate stabilized by a long-chain aliphatic carboxylic acid coating, and its uses

IN Block, Christian; Schreiber, Gerald

PA Henkel K.-G.a.A., Germany

SO PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM C01D015-10

ICS A61K033-00; C11D003-39

CC 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 46, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9217404	A1	19921015	WO 1992-EP577	19920317

W: JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE

PRAI DE 1991-4109954 19910326

AB The **coating** consists at least partially of .gtoreq.1 carboxylic acids m. <35.degree. and .gtoreq.1 carboxylic acids m. >35.degree.. Na **percarbonate** stabilized by a **coating** with long-chain aliph. carboxylic acids contg. .gtoreq.8 but preferably .ltoreq.24 C atoms, are extraordinarily stable, even in moist and warm atms., and is used as oxidizing agent in cleaning compns., disinfectant formulations, and laundry **detergents**. A mixt. consisting of 92.5 wt.% com. Na **percarbonate coated** with 7.5 wt.% of a 1:1 mixt. of Edenor V 85 KR (C8-10-**fatty acids**) and tech. **stearic** acid was free-flowing, and used in a **detergent** compn. consisting of Na dodecylbenzenesulfonate 16, tallow alc.

ethoxylate

5, Na2CO3 20, Na **silicate** 8.5, acrylic acid-maleic acid copolymer 4.5, **zeolite** A 28, tetraacetylenethylenediamine (**granulated**, 96%) 2, and additives, e.g., enzymes, optical brighteners, perfume), Na2SO4, and water 16 wt.%. The active O content

of

the formulation after storage for 2 wks at 43.degree. and relative humidity 98% was 36, vs. 22 and 4%, resp., for formulations contg. conventionally **coated** and uncoated Na **percarbonate**.

ST sodium **percarbonate** stabilization **coating**; carboxylic acid **coating** sodium **percarbonate**; aliph carboxylic acid **coating**; Edenor V85KR aliph carboxylic acid; **stearic** acid Edenor V85KR **coating**; cleaning compn stabilized sodium **percarbonate**; disinfectant formulation stabilized sodium **percarbonate**; laundry detergent stabilized sodium **percarbonate**

IT **Fatty acids**, uses

RL: USES (Uses)

(C8-11, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Fluorescent brighteners

Perfumes

Enzymes

RL: USES (Uses)

(detergents contg., sodium percarbonate stabilization for, by coating with carboxylic acids)

IT Bactericides, Disinfectants, and Antiseptics  
(sodium percarbonate for, stabilization of, by coating with carboxylic acids)

IT Zeolites, uses  
RL: USES (Uses)  
(A, detergents contg., sodium percarbonate stabilization for, by coating with carboxylic acids)

IT **Fatty acids**, uses  
RL: USES (Uses)  
(C12-22, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT **Fatty acids**, uses  
RL: USES (Uses)  
(C8-10, **coating** with Edenor V 85KR, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Alcohols, uses  
RL: USES (Uses)  
(C8-22, compns. contg. carboxylic acids and, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Alcohols, compounds  
RL: USES (Uses)  
(C8-22, ethoxylated, compns. contg. carboxylic acids and, coating with,  
of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Detergents  
(cleaning compns., sodium percarbonate for, stabilization of, by coating with carboxylic acids)

IT Coating process  
(fluidized-bed, stabilization by, of sodium percarbonate, with carboxylic acids, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Detergents  
(laundry, sodium percarbonate for, stabilization of, by coating with carboxylic acids)

IT Carboxylic acids, uses  
RL: USES (Uses)  
(long-chain, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Amides, uses  
RL: USES (Uses)  
(long-chain, N-(hydroxyalkyl), compns. contg. carboxylic acids and, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT **Fatty acids**, esters  
RL: USES (Uses)  
(long-chain, esters, compns. contg. carboxylic acids and, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Alcohols, compounds  
RL: USES (Uses)

(tallow, ethoxylated, detergents contg., sodium percarbonate  
 stabilization for, by coating with carboxylic acids)

IT 26896-18-4, Isononanoic acid 30399-84-9, Isostearic acid 32844-67-0,  
 Isopalmitic acid  
 RL: USES (Uses)  
 (coating with, of sodium percarbonate, for stabilization, for cleaning  
 compns. and disinfectant formulations and laundry detergents)

IT 497-19-8, Carbonic acid disodium salt, uses 1344-09-8, Sodium silicate  
 7757-82-6, Sodium sulfate, uses 10543-57-4, Tetraacetythylenediamine  
 25155-30-0, Sodium dodecylbenzenesulfonate 29132-58-9  
 RL: USES (Uses)  
 (detergents contg., sodium percarbonate stabilization for, by coating  
 with carboxylic acids)

IT 3313-92-6, Sodium percarbonate  
 RL: USES (Uses)  
 (oxidizing agent, stabilization of, by coating with carboxylic acids,  
 for cleaning compns. and disinfectant formulations and laundry  
 detergents)

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L5 ANSWER 47 OF 89 CA COPYRIGHT 2002 ACS  
 AN 115:235227 CA  
 TI Bleaching agents and bleaching detergent compositions with good storage stability  
 IN Kuroda, Mutsumi  
 PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C11D007-54  
 ICI C11D007-54, C11D007-26, C11D007-34  
 CC 46-5 (Surface Active Agents and Detergents)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03115496	A2	19910516	JP 1989-254213	19890929
AB	The title compns. contain Na <b>percarbonate</b> (I) <b>particles coated with fatty acid</b> mixts. contg. .gtoreq.60% C16 and C18 <b>fatty acids</b> and 15-70% unsatd. <b>fatty acids</b> and <b>granular</b> bleach activators having phenolsulfonic acid (salt) as leaving groups. Heating C9H19N+Me2(CH2)3CO2-p-C6H4SO3- with 20 g polyethylene glycol, extruding to give a <b>granulated</b> bleach activator, and mixing the <b>granules</b> (5%) with 10% I ( <b>coated</b> with mixt. contg. C16 29.3, C18 16.3, monounsatd. C16 4.1, monounsatd. C18 38.5, and diunsatd. C18 <b>fatty acid</b> 3.6%) and 85% other <b>detergent</b> components gave a bleaching <b>detergent</b> which retained 89.2% of the available O during 14 days at 40.degree. and 80% relative humidity.				
ST	bleach <b>percarbonate</b> detergent stability; <b>fatty acid coating percarbonate</b> stability; phenolsulfonate bleach activator detergent; sulfophenol bleach activator detergent				
IT	Quaternary ammonium compounds, uses and miscellaneous RL: USES (Uses) (bleaching activators, detergents contg. percarbonate and, stable)				
IT	<b>Fatty acids</b> , uses and miscellaneous RL: USES (Uses) (sodium <b>percarbonate particles coated</b> by, for stability in <b>detergents</b> )				
IT	Bleaching agents (sodium <b>percarbonate, fatty acid-coated</b> , detergents contg., stable)				
IT	Detergents (laundry, contg. sodium percarbonate and bleach activator, storage-stable)				
IT	89740-11-4	117205-23-9	132787-34-9	132787-35-0	132787-37-2
	137023-82-6	137170-47-9			
	RL: USES (Uses) (bleaching activators, detergents contg. percarbonate and, stable)				
IT	3313-92-6, Sodium <b>percarbonate</b> RL: USES (Uses) (bleaching agents, <b>fatty acid-coated</b> , storage-stable, detergents contg.)				

L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS

AN 110:97601 CA

TI Surface treatment of solid detergent components in a fluidizing apparatus  
IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg,  
Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell,  
Lothar

PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.

SO Ger. (East), 8 pp.

CODEN: GEXXA8

DT Patent

LA German

IC ICM B01J002-16

ICS C11D003-395; C11D007-54; C11D011-02

CC 46-5 (Surface Active Agents and Detergents)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	DD 255882	A1	19880420	DD 1986-296068	19861107
AB	In the title treatment, solid <b>detergent</b> components <b>fluidized</b> by a gas flowing upward are subjected to gas streams flowing into the <b>fluidized particles</b> in a predominantly horizontal direction to prevent zones of low turbulence and give uniform treatment of the <b>particles</b> . The process was used to treat a solid <b>detergent</b> compn. contg. Na5P3O10 46, soda 14, Na <b>perborate</b> 24, Na disilicate 8, MgSO4 6, cellulose ether 1.7, and optical brightener 0.3% by adding alkylbenzenesulfonic acid, <b>fatty acids</b> , and nonionic surfactant in 6:1:2 ratio to the top of the <b>fluidizing</b> app. Steam contg. NaOH was used as a carrier for injection of the added components.				
ST	fluidization app detergent treatment; laundry detergent fluidization treatment				
IT	Fluidization (of detergent components, for uniform surface treatment)				
IT	<b>Detergents</b> (laundry, manuf. of, fluidizing app. for surface treatment of <b>particles</b> in)				

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L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS  
 AN 110:97601 CA  
 TI Surface treatment of solid detergent components in a fluidizing apparatus  
 IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg,  
 Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell,  
 Lothar  
 PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.  
 SO Ger. (East), 8 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 IC ICM B01J002-16  
 ICS C11D003-395; C11D007-54; C11D011-02  
 CC 46-5 (Surface Active Agents and Detergents)  
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ST	fluidization app detergent treatment; laundry detergent fluidization treatment				
IT	Fluidization (of detergent components, for uniform surface treatment)				
IT	<b>Detergents</b> (laundry, manuf. of, fluidizing app. for surface treatment of <b>particles</b> in)				

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L5 ANSWER 53 OF 89 CA COPYRIGHT 2002 ACS  
 AN 105:26172 CA  
 TI Continuous dusting of **granulated detergent** products  
 IN Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar; Kliefoth, Joerg;  
 Schmidt, Eberhard; Meinhard, Ruediger; Geitner, Frank; Sieg, Norbert;  
 Uhlig, Norbert; Voelker, Cornelia  
 PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.  
 SO Ger. (East), 4 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 IC ICM B01J002-30  
 ICS C11D011-00  
 CC 46-5 (Surface Active Agents and Detergents)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 228458	A1	19851016	DD 1983-258342	19831221
AB	<p> <b>Powd. detergent</b> components and liq. <b>detergent</b> components are added continuously to a <b>fluidized</b> bed of <b>detergent particles</b> (varying in size between <b>powder</b> and <b>granule</b> sizes), and dry <b>granules</b> having sufficient size and d. are removed from the base of the app. to give a <b>granulated detergent</b> having a uniform compn., <b>particle</b> size, and bulk d. Thus, powd. components comprising Na<sub>5</sub>P<sub>3</sub>O<sub>10</sub> 600, calcined soda 150, Na<sub>2</sub>SO<sub>4</sub> 390, Na <b>perborate</b> 210, Na disilicate 60, Mg <b>silicate</b> 45, and CM-cellulose 15 kg/h and liq. components comprising dodecylbenzenesulfonic acid 130, <b>fatty acid</b> 85, and nonionic surfactants 15 kg/h were added to a <b>fluidized</b> bed, and <b>granules</b> (90% having <b>particle</b> size 0.7-0.8 mm, bulk d. 600 kg/m<sup>2</sup>) were removed from the bottom of the <b>fluidized</b> layer. The <b>granules</b> were resistant to <b>agglomeration</b>.           </p>				
ST	<p> <b>granulation detergent</b> fluidizing process;  <b>agglomeration</b> prevention <b>detergent granule</b> </p>				
IT	<p> <b>Detergents</b>            (granulation of powd. and liq. components of, in fluidized bed)         </p>				
IT	<p> <b>Agglomeration</b>            (prevention of, in granulation of <b>detergents</b> in fluidized bed)         </p>				
IT	<p> <b>Granulation</b>            (fluidized-bed, of powd. and liq. <b>detergent</b> components in)         </p>				

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L5 ANSWER 56 OF 89 CA COPYRIGHT 2002 ACS  
 AN 103:125372 CA  
 TI Device for surface spraying of fluidized bed granulate products  
 IN Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar; Kliefoth, Joerg;  
 Schmidt, Eberhard; Meinhard, Ruediger; Geitner, Frank; Sieg, Norbert;  
 Uhlig, Norbert; Voelker, Cornelia  
 PA VEB Waschmittelwerk, Ger. Dem. Rep.  
 SO Ger. (East), 4 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 IC ICM B01J002-16  
 ICS B01J008-24  
 CC 46-1 (Surface Active Agents and Detergents)  
 Section cross-reference(s): 47

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 221377	A1	19850424	DD 1983-258341	19831221
AB	An app. for the conversion of <b>powders</b> to <b>granulated</b> products such as <b>detergents</b> is described. The app. has an inlet at the top for adding a powd. compn., inlets at the top, metal, and bottom for adding <b>fluidizing</b> gas, an inlet near the middle for spraying a liq. compn. onto a powd. compn., a means in the middle for dispersing solid material, an outlet at the top for gas, and an outlet at the bottom for the <b>granulated</b> product. The app. prevents <b>agglomeration</b> during the manuf. of <b>granulated</b> products. Thus, the <b>granulation</b> app. was used to convert a powd. mixt. (900 kg/h) of Na <sub>5</sub> P <sub>3</sub> O <sub>10</sub> , Na <sub>2</sub> CO <sub>3</sub> , Na <sub>2</sub> SO <sub>4</sub> , Na <b>perborate</b> , Na disilicate, Mg <b>silicate</b> , and CM-cellulose to a <b>granulated</b> product ( <b>particle</b> size 0.8 mm, bulk d. 600 kg/m <sup>2</sup> ) by spraying the <b>powder</b> with a liq. compn. (140 kg/h) contg. dodecylbenzenesulfonate, <b>fatty acid</b> , and nonionic surfactant.				
ST	<b>granulation</b> fluidization app <b>detergent</b> ; <b>powder</b> fluidization <b>granulation</b> app; <b>agglomeration</b> prevention <b>granulation powder</b>				
IT	Granulating apparatus (for powders, by spraying with liq. in fluidized state)				
IT	<b>Detergents</b> (manuf. of <b>granulated</b> , from <b>powders</b> , app. for)				
IT	Agglomeration (prevention of, in app. for granulation of powder with liq.)				

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L5 ANSWER 60 OF 89 CA COPYRIGHT 2002 ACS  
 AN 94:123531 CA  
 TI Continuous production of **granulated detergents** and  
 cleaning agents in fluidized bed apparatus  
 IN Mittelstrass, Manfred; Moerl, Lothar; Kuenne, Hans Joachim; Sachse,  
 Joachim; Schmidt, Eberhard; Schultz, Wolfgang; Sieg, Norbert  
 PA Ger. Dem. Rep.  
 SO Ger. (East), 11 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 IC B01J008-24; C11D011-00  
 CC 46-5 (Surface Active Agents and Detergents)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 140987	Z	19800409	DD 1979-210340	19790105
	SU 1081203	A1	19840323	SU 1979-7770975	19791213
PRAI	DD 1979-210340		19790105		

AB Dodecylbenzenesulfonic acid (I) [27176-87-0] (contg. **fatty acids** and nonionic surfactants in some cases) is sprayed on a mixt. of Na5P3O10 (phase II content >90%) and other powd. **detergent** components in a **fluidized** bed app. in a method for the continuous prodn. of **granular detergents**. Thus, 85 parts of mixt. of Na5P3O10 (95% phase II, bulk d. 1000 g/L, 80% **particle** with diam. <0.2 mm) 40, Na2CO3 10, Na2SO4 25.8, Na **perborate** 14, and additives 10.2% was **fluidized** and sprayed with 15 parts 10:7 I-**fatty acid** mixt. to prep. dust-free **granules** with bulk d. 530 g/L.  
 ST sodium tripolyphosphate **detergent** fluidization **granulation**; dodecylbenzenesulfonic acid **granulation detergent** fluidization; phosphate builder **detergent granulation**  
 IT Fluidized beds and systems  
 (granulation of tripolyphosphate-contg. **detergent powders** in)  
 IT **Detergents**  
 (granulation of tripolyphosphate-contg., in fluidized bed)  
 IT **Granulation**  
 (of **detergents** contg. sodium tripolyphosphate, in fluidized bed)  
 IT 7758-29-4  
 RL: USES (Uses)  
 (granulation of **detergent powders** contg., in fluidized bed)  
 IT 27176-87-0  
 RL: USES (Uses)  
 (granulation of tripolyphosphate-contg. **detergents** by, in fluidized bed)

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L7 ANSWER 1 OF 13 CA COPYRIGHT 2002 ACS

TI Method for the production of particulate washing or cleaning agents

L7 ANSWER 2 OF 13 CA COPYRIGHT 2002 ACS

TI **Detergent particle** groups and manufacturing methods therefor

L7 ANSWER 3 OF 13 CA COPYRIGHT 2002 ACS

TI Coated (cyanomethyl)trialkylammonium salt granules as activators for bleaches

L7 ANSWER 4 OF 13 CA COPYRIGHT 2002 ACS

TI Process for the production of a detergent composition

L7 ANSWER 5 OF 13 CA COPYRIGHT 2002 ACS

TI Continuous production method of high density **powder detergents** with high fluidity

L7 ANSWER 6 OF 13 CA COPYRIGHT 2002 ACS

TI **Powdered detergent** compositions

L7 ANSWER 7 OF 13 CA COPYRIGHT 2002 ACS

TI **Powder detergent** composition for cold water laundering of fabrics

L7 ANSWER 8 OF 13 CA COPYRIGHT 2002 ACS

TI Continuous dusting of **granulated detergent** products

L7 ANSWER 9 OF 13 CA COPYRIGHT 2002 ACS

TI Device for surface spraying of fluidized bed granulate products

L7 ANSWER 10 OF 13 CA COPYRIGHT 2002 ACS

TI Coated particulate material

L7 ANSWER 11 OF 13 CA COPYRIGHT 2002 ACS

TI Decomposition-resistant **powdered detergents**

L7 ANSWER 12 OF 13 CA COPYRIGHT 2002 ACS

TI Bleaching and washing agents

L7 ANSWER 13 OF 13 CA COPYRIGHT 2002 ACS

TI Detergent tablets

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